NOTES ON REPRODUCTIVE BEHAVIOUR IN THE TIGER SNAKE (*NOTECHIS SCUTATUS*).

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Seven *Notechis scutatus occidentalis* (3 females and 4 males) were housed for observation in a round, corrugated iron enclosure, 2.4 metres in diameter. Refugia were made by covering depressions in the soil with plow discs; these in turn were covered with a layer of soil several centimetres thick. Some other cover was provided in the form of mallee roots and rocks. Vegetation consisted of grasses found in this area. Fresh water was available at all times in a plastic lined excavation.

The snakes were fed frogs (*Litoria cyclorhyncha*), which are very common in this area and laboratory mice. The latter were regularly used as "capsules" to administer a vitamin supplement in the form of cod-liver oil; this was interjected into the gut cavity of dead mice, which were in turn fed to the snakes.

Mating was observed in autumn (April and May), although only on a limited scale. This activity peaked for a period of about three weeks in September. At this time, on days with a mean temperature of 16°C or higher, the males appeared to be in a highly agitated state. Some mating activity was observed as early as the middle of August, tapering off to almost nothing by the middle of October.

During the peak in mating activity, males showed no interest in food, while at the same time females would devour all that was available.

The locating of females by the males appears to be random, e.g. a male is continually on the move until it comes into contact with a female, when it immediately attempts copulation; or, if the female moves past it, the male becomes alert and pursues the female in the same way as it hunts prey.

When aroused, a male does not appear to be able to determine the sex of another individual. Often an active male approached another male in the same way as it approached a female prior to copulation, although at this time the passive male would display pronounced defensive behaviour, viz. distending the hood and elevating the forebody obliquely so that the dorsal aspect of the hood was presented towards the active male. During several of these male-male encounters, this behavoiur was sufficient to discourage the active individual, although at other times the aroused male would move along the body of the passive individual in an attempt to attain the copulation position. This led to considerable entwining of both snakes in what is typical male-male combat behaviour (see Worrell, 1963: pl. 59).

Prior to copulation the male moves along the female's body touching it with its snout. This movement may commence at any point along the intended mate's body, although no attempt at copulation takes place until the male's snout is positioned somewhere near the female's head. Then, at intervals of from sixty seconds to five minutes, the male's body commences spasmodic twitching; at the climax the tail is curved under the female's and drawn forward in an attempt to align the sexual organs (see Worrell, 1963: pl. 46 and 59).

The spasmodic movement by the male over the female appears to stimulate her in two ways: 1) to elevate the tail, sometimes almost to the vertical; and 2) to dilate the cloacal aperture. This reaction was not observed in females that had previously been inseminated.

Although attempts by males at copulation often appeared to be made in exposed parts of the enclosure effective union was only observed to take place in partially protected areas i.e. beneath an overhanging slab of rock, and amongst the mallee roots.

The only way to determine whether copulation was occurring was to disturb the mating pair. Attempts at recording the duration of coupling were thus unsatisfactory, although observations suggested that copulation was taking place for periods of from several minutes to several hours.

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REFERENCE

WORRELL, E. 1963. *Reptiles of Australia*. Angus and Robertson, Sydney.